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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,579	04/20/2006	Daniel Dupuis	39438-402800	1495
27717	7590	12/01/2009	EXAMINER	
SEYFARTH SHAW LLP 131 S. DEARBORN ST., SUITE 2400 CHICAGO, IL 60603-5803				NGUYEN, XUAN LAN T
ART UNIT		PAPER NUMBER		
3657				
MAIL DATE		DELIVERY MODE		
12/01/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/553,579	DUPUIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Lan Nguyen	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 25 August 2009.  
 2a) This action is **FINAL**.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-3,5-16 and 21-31 is/are pending in the application.  
 4a) Of the above claim(s) 14-16 and 21-31 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3 and 5-13 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 25 August 2009 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input checked="" type="checkbox"/> Other: <u>approved drawing</u> .

## DETAILED ACTION

### *Drawings*

1. The drawing was received on 8/25/09. The drawing is approved.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu (5,831,417) in view of Youichirou (JP 03037433).

Re: claim 1, Chu shows a friction brake assembly, in figure 5, to act between a first component, a reel, and a second component, a fishing rod, relatively moveable with respect to said first component, as in the present invention, comprising: a brake member 339 connected to said first component, a carrier 337 connected to said second component; a friction pad (not shown but inherent in a brake shoe) attached to said carrier for engagement with said brake member; a first actuator 305c including at least one shape memory alloy element, said first actuator being operable upon said carrier to move said friction pad into engagement with said brake member; and a control circuit 309 to operate selectively said first actuator. Chu lacks a second actuator to release the brake. Youichirou is relied upon to teach the concept of having two SMA actuators.

As shown in figures 1 and 2, a gear brake actuated by two SMA actuators 3 and 6 wherein actuator 3 engages the gear brake 4 while actuator 6 releases the gear brake 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Chu's brake to include a second SMA actuator in order to properly release the brake as taught by Youichirou.

Re: claims 2, 3, 8 and 9, Youichirou teaches a connector 5b connecting first and second actuators to the carrier 2b to ensure a proper braking and releasing of the brake.

Re: claims 5, 6 and 10-12, Chu and Youichirou show said shape memory alloy elements are tensile elements and said control circuit 309 changes the length of said elements to actuate said brake; wherein said control circuit supplies an electrical current to respective ones of said elements to change the length thereof as shown in Youichirou's figures 1 and 2. The Examiner takes an Official Notice that having multiple parallel tensile SMA elements instead of one SMA element is a matter of practicality in that the multiple SMA elements would act as back up elements and would have been obvious to one of ordinary skill in the art to have provided redundancy to ensure a proper operation and to increase longevity of the brake assembly.

Re: claim 7, Chu shows the brake member as a drum 339 rotatably mounted on said first component and said carrier 337 is pivotally secured to said actuator 305c and said would be second actuator as modified by Youichirou for movement into or out of engagement with said drum.

Re: claim 13, Chu shows said carrier 337 is pivotally mounted for movement about an axis, at the apex of the triangle, parallel to but spaced from the axis of rotation of said drum 339.

***Response to Arguments***

4. Applicant's arguments filed 8/25/09 have been fully considered but they are not persuasive.

- Applicant argues that Youichirou's positive gear brake and the claimed friction brake are not equivalent effects. It is believed that they both are in the same brake art. However, Youichirou is cited to teach two SMA actuators and not to teach the gear brake. Chu is the base reference and clearly shows the friction brake having similar structures as Applicant's friction brake. Youichirou teaches the concept of having two SMA actuators to apply and to release the brake. When one of ordinary skill in the art combines the base structures of the brake of Chu with the teaching of two SMA actuators, one would arrive at a friction brake such as Chu and two SMA actuators to apply and to release the brake of Chu. The combination of the brake of Chu with two SMA actuators as taught in concept by Youichirou meets the claimed brake of the instant application.
- The rejection is still deemed proper and is maintained as stated above.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xuan Lan Nguyen/  
Primary Examiner  
Art Unit 3657